CALFED DRINKING WATER QUALITY ISSUES
MONITORING AND ASSESSMENT
"FACTS AT A GLANCE"

(from MWQI)

- The Sacramento-San Joaquin Delta serves nearly 23 million in California with drinking water.

- New State and federal drinking water regulations are requiring increasing levels of treatment, the cost of which could be staggering to the industry, thus making the quality of the source waters from the Delta of critical importance.

- Disinfection, which is needed to protect against microbial disease, produces disinfection byproducts (DBPs) that may pose other health risks such as cancer, spontaneous abortions and toxic affects. Organic carbon and bromide are the DBP precursors of chief concern in Delta source water.

- The Key Parameters for Monitoring and Assessment Related to Drinking Water Are:

Monitoring Parameter	Significance to Drinking Water Quality
TOC (DBP precursor)	Formation of disinfection byproducts
Bromide (DBP precursor)	Formation of brominated disinfection byproducts
Pathogenic organisms	Waterborne diseases
Chemical contaminants	Regulated drinking water quality constituents
TDS or salinity	Taste and odor problems (salty taste), corrosion of infrastructure and appliances, and impacts on wastewater reclamation programs, groundwater conjunctive use programs, and blending projects
Nutrients	Taste and odor problems (algae - geosmin and 2-methylisoborneol), impacts on filtration (algae)
Turbidity	Impacts on filtration and disinfection

- Summary of Drinking Water Quality Monitoring, Assessment and Research Needs:

- Identify the existing key sources and loads of DBP precursors and other drinking water quality parameters of concern
- Determine how CALFED programs such as Ecosystem Restoration will affect the loading of DBP precursors and other drinking water parameters of concern
- Determine the effect of operational changes (such as reservoir reoperations, flow barriers, exports) on delivered water quality
- Develop models to assess and predict the effects of CALFED programs on concentrations of DBP precursors and other drinking water parameters of concern
- Develop accurate predictive models for transport and fate of pathogens, DBP precursors, and other drinking water parameters of concern
- Identify methods for accurate quantitative determination of pathogens
- Identify source control measures for pathogens, DBP precursors, and other drinking water parameters of concern
- Perform and evaluate pilot scale implementation of source control measures
- Identify short and long term monitoring and assessment needs

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